ACARUS SCABEII

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THE acarus of scabies is a constant parasite of the human race. Every physician in his practice sees many cases yearly, but I doubt if the average physician is able to make a positive diagnosis by actual demonstration of the parasite more often than in one patient out of five. This inability to demonstrate the acarus is usually due to a misconception of the pathology of the lesions and the lack of knowledge as to where in the burrow the parasite is to be found. As we read our textbooks it seems a simple matter to locate and pick out the acarus and examine it under the microscope. However, I know of dermatologists who are never able to satisfactorily demonstrate the organism.

When one thinks about what happens in the burrow it is not difficult to accurately trace the parasite and remove it for demonstration. The majority of physicians in their search immediately open the vesicle and search for the parasite within its contents and are baffled when no parasites are found. They also attempt to find the parasite in the papular lesions on the skin of the forearms and abdomen where the search is very difficult, as it is only in the burrows that the organism can be seen and successfully recovered. In lesions on the wrists and hands, where burrows are always present, there should never be any failure in the demonstration of the acarus. The drawing that accompanies the article shows rather schematically the conditions and types of the burrows one most commonly finds.

When the burrow is examined, if it has been there for some time, one first sees the entrance end of the burrow with the skin exfoliated. This is a remnant of the old burrow and has been passed through several days before. We naturally do not find the acarus here. By following this we next see the tract of the burrow, which is filled with tiny black grains; these are made up of altered blood and the feces of the insect. The parasite is also not found here. Next we come to a vesicle with an inflammatory reaction, and here we search with very rare success for the parasite that is ordinarily not found therein. If we then carefully scrutinize the skin surrounding the burrow, we find a faintly inflamed tract passing out from the vesicle, usually on the opposite side, and by following it to its end we see a tiny white dot that resembles a scale in the skin. At this point there is no inflammatory reaction. Now if we take the tip of a knife—and I find a paracentesis knife the best for the purpose—and prick out this white body and set it into a drop of water, we find that we have recovered the acarus of scabies. The physician who carries out these steps of examination and searches for the white dot at the uninflamed extremity of the burrow has learned to successfully discover the parasite.

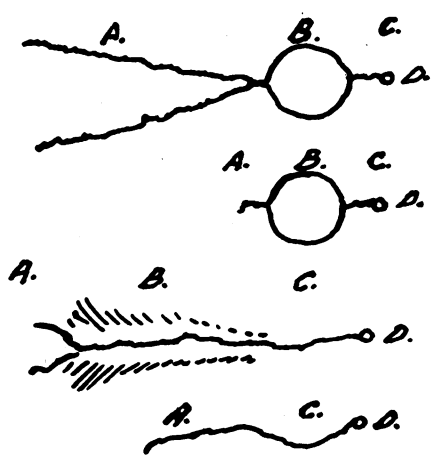

Fig. 1.—A. Old tract of entry. B. Vesicle or other type of reaction. C. Recent tract. D. Immediate position of acarus.

A brief consideration shows the cause of failure and the reason why the vesicle does not contain the parasite. We do not find the parasite at the beginning of the burrow for obvious reasons. Next, the vesicle is an inflamed reaction to the irritant action of the parasite and whatever bacteria may have been carried into the skin by its presence. The formation of a vesicle from irritation and the process of bacterial growth is of course slow, and probably twelve hours or more elapse before a vesicle is formed. Within this passage of time the acarus has continued onward and the vesiculation follows behind it at a definite interval. The acarus is found at the outermost extremity because it is there it is actively burrowing. The acarus also is found immediately below the surface layers of the skin, because it is not a deep worker, and the skin is sufficiently translucent to show its whitish body shining through. Lesions on the abdomen and arms of patients, unless they be infants, do not show definite burrows, as the acarus probably does not remain long in these areas of tender skin but burrows in, feeds, and comes out and then seeks a new location. In thickened skin the labor of entry is greater, so that it chooses to remain in the happy hunting ground of its burrow. When the parasite is found in the vesicle it is probable that more than one parasite has been present or has been caught in a resting stage or has lingered to lay eggs or carry out its amours.

In summarizing, then, do not look for the *Acarus scabeii* in the vesicle, but only where the white dot demonstrates its definite presence at the end of its burrow. In the absence of a burrow the diagnosis is necessarily made on the symptomatology and the distribution of the lesions.

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PSITTACOSIS

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THE State Board of Health has called attention to the existence of psittacosis in California. The following report may therefore be of interest:

REPORT OF CASE

CASE 5003.—Mrs. S., white, female, age fifty-one, weight about 187, height about five feet four and one-